Stem Cell-Based iNKT Cell Therapy for Cancer

Grant Award Details

Stem Cell-Based iNKT Cell Therapy for Cancer

Grant Type: Therapeutic Translational Research Projects

Grant Number: TRAN1-08533

Project Objective: Pre-IND meeting

Investigator:

Name:	Lili Yang
Institution:	University of California, Los Angeles
Type:	PI

Disease Focus: Cancer

Human Stem Cell Use: Adult Stem Cell

Award Value: $6,956,775

Status: Active

Grant Application Details

Application Title: Stem Cell-Based iNKT Cell Therapy for Cancer

Public Abstract:

Translational Candidate

Lenti/iNKT-sr39TK Modified Autologous Human CD34+ Hematopoietic Stem Cells (HSCs)

Area of Impact

The targeted area of impact for the candidate is cancer therapy, in particular cancers that are lacking existing effective treatments.

Mechanism of Action

The proposed candidate will generate therapeutic levels of invariant natural killer T (iNKT) cells in cancer patients, helping them to battle their deadly diseases. These iNKT cells can both directly kill tumor cells, and activate other immune cells like natural killer (NK) cells and cytotoxic T cells (CTLs) to eradicate tumor.

Unmet Medical Need

Despite the existing therapies, cancer patients still suffer from the ineffectiveness of these treatments, their toxicities, and the risk of relapse. Our proposed Stem Cell-Based iNKT Cell Therapy represents a novel therapy for cancer that can potentially help many cancer patients.

Project Objective

Pre-IND meeting

Major Proposed Activities

- Conduction of Preclinical Studies
- Development of a Clinical Trial Protocol
- Preparation for and Conduction of a Pre-IND Meeting with the FDA

Statement of Benefit to California:

Cancer is a leading threat to public health in the United States and in the State of California. In 2015, it is estimated that over 160,000 Californians can be diagnosed with cancer. Cancer is the second leading cause of death in California, and also brings devastating economic impacts to the State. Our proposed Stem Cell-Based iNKT Cell Therapy, if successful, has the potential to save the lives of Californians and reduce the economic burden for cancer treatment.

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